76. (Amended). The test kit of claim 75, wherein the polypeptide is attached to a solid phase.

80. (Amended). A method for producing antibodies which specifically bind to BS322 antigen, comprising:

administering to an individual an isolated immunogenic polypeptide in an amount sufficient to elicit an immune response,

wherein said immunogenic polypeptide is selected from the group consisting of: SEQ ID NO: 24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, and SEQ ID NO:28.

REMARKS

Reconsideration of the above-identified application in view of the following remarks is respectfully requested.

Drawings

The Examiner requested that Applicants respond to the objections to the Drawings set forth in PTO-948. Applicants mailed corrected drawings in the above-identified application on July 23, 2002.

Rejection of Claims 52-61, 70 and 77-81 Under 35 U.S.C. Sections 101 and 112, First Paragraph

Claims 52-61, 70 and 77-81 are rejected under 35 U.S.C. Sections 101 and 112, first paragraph, for the reasons contained in the previous Office Action.

BS322 is a transcription factor in breast tissue. As discussed in Applicants last Amendment, an alignment between BS322 and NY-BR-1 was provided along with a publication in *Cancer Research* (Jager, D., et al., *Cancer Research*, 61:2055-2061 (2001)). The publication in *Cancer* Research showed that NY-BR-1 is expressed in breast cancer tissues. Applicants argued that since BS322 and NY-BR-1 are the same

molecule that BS322 clearly possessed utility as a diagnostic tool for the detection of breast cancer.

In the present Office Action, the Examiner raised a number of questions regarding the sequence alignment between NY-BR-1 and BS322 provided in Applicants last Amendment. Specifically, the Examiner stated that the sequence alignment between NY-BR-1 and BS322 did not indicate what corresponding sequence of BS322 was actually used to produce the alignment. The Examiner also questioned the difference in length between NY-BR-1 and BS322 and the percentage identity over the entire length of the sequences. Applicants herewith enclose the declaration of Dr. Edward Granados. Applicants submit that this declaration answers many of the questions raised by the Examiner in the Office Action.

The Examiner also states that Applicants have not provided a comparison of the polypeptide sequences of SEQ ID NOS:25-28 with the polypeptide sequence of NY-BR-1. Applicants submit that this issue has also been addressed in the declaration of Dr. Granados. As the Examiner is already aware, SEQ ID NO:9 is the consensus sequence for BS322. It contains 3 open reading frames. As shown by the alignments provided, BS322 and N4-BR-1 are highly related sequences and therefore would have similar utility to detect breast cancer.

Thereupon, in view of the Declaration of Dr. Granados and the arguments provided in Applicants previous Amendment, Applicants submit that this rejection should be withdrawn.

Rejection of Claims 52-61 Under 35 U.S.C. Section 112, First Paragraph

Claims 52-61 are rejected under 35 U.S.C. Section 112, First Paragraph as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention.

In view of the amendments to claims 52, 55, 57, 60 and 61 to remove the percent homology language, Applicants submit that this rejection has now been rendered moot and should be withdrawn.

Rejection of claims 62-69, 72-76 and 80 Under 35 U.S.C. Section 112, Second Paragraph as being indefinite.

Claims 62-69, 72-76 and 80 are rejected under 35 U.S.C. Section 112, Second Paragraph as being indefinite.

Applicants have amended claims to clarify that the isolated polypeptides according to SEQ ID NO:24-28 are not isolated polynucleotides or DNA molecules. Applicants thank the Examiner for pointing out this discrepancy. In view of the aforementioned arguments, Applicants submit that this rejection should be withdrawn.

CONCLUSION

In view of the aforementioned amendments and arguments, Applicants submit that the above-identified claims are now in condition for allowance.

23492

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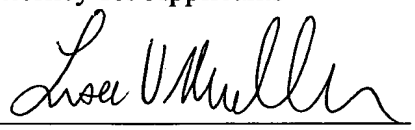
Respectfully submitted,
P.A. Billing-Medel, et al.

Mimi C. Goller
Registration No. 39,046
Attorney for Applicants



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Attorney for Applicants

Version with Markings to Show Changes Made

52. (Twice Amended). A purified polypeptide[, having at least 95% identity over the entire length of a] having an amino acid sequence selected from the group consisting of: SEQ ID NO: 24, SEQ[UENCE] ID NO:25, SEQ[UENCE] ID NO:26, SEQ[UENCE] ID NO:27, and SEQ[UENCE] ID NO:28.

55. (Twice Amended). A test kit for determining if a BS322 antigen or anti-BS322 antibody is present in a test sample, said kit comprising:

a container containing at least one BS322 polypeptide having [at least 95% identity over the entire length of] a sequence selected from the group consisting of SEQ ID NO: 24, SEQ[UENCE] ID NO:25, SEQ[UENCE] ID NO:26, SEQ[UENCE] ID NO:27, [and] SEQ[UENCE] ID NO:28.

57. (Amended). A method for detecting at least one antibody specific for a BS322 antigen in a test sample suspect of containing the antibody, said method comprising:

(a) contacting the test sample with a BS322 polypeptide for a time and under conditions sufficient to allow antigen/antibody complexes to form;

wherein said BS322 polypeptide contains at least one BS322 epitope derived from an amino acid sequence [having at least 90% identity over the entire length of a sequence] selected from the group consisting of SEQ ID NO[S]:24[-28] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28; and

(b) detecting the presence of said complexes as an indication of the antibody specific for the BS322 antigen.

60. (Amended). A method for producing antibodies which specifically bind to a BS322 antigen, said method comprising:

administering to an individual an isolated immunogenic polypeptide in an amount sufficient to elicit an immune response,

wherein said immunogenic polypeptide comprises at least one BS322 epitope and has [at least 90% identity over the entire length of] a sequence selected from the group consisting of: SEQ ID NO[S]:24[-28] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

61. (Amended). A method for producing antibodies which specifically bind to a BS322 antigen, comprising:

administering to an individual a plasmid,

wherein said plasmid comprises a sequence which encodes at least one BS322 epitope derived from a polypeptide having an amino acid sequence [with least 90% identity over the entire length of a sequence] selected from the group consisting of SEQ ID NO[S]:24[-28] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

62. (Amended). A purified [polynucleotide] polypeptide, selected from the group consisting of: SEQ ID NO:24, SEQ ID NO[S]:25[-28], SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

63. (Amended). The [polynucleotide] polypeptide of claim 62, wherein said [polynucleotide] polypeptide is produced by recombinant techniques.

64. (Amended). The [polynucleotide] polypeptide of claim 62, wherein said [polynucleotide] polypeptide is produced by synthetic techniques.

65. (Amended). A test kit for determining if BS322 antigen or anti-BS322 antibody is present in a test sample, said kit comprising:

a container containing at least one purified [polynucleotide] polypeptide selected from the group consisting of SEQ ID NO[S]:24[-28] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

66. (Amended). The test kit of claim 65, wherein the purified [polynucleotide] polypeptide is attached to a solid phase.

67. (Amended). A method for detecting at least one antibody specific for a BS322 antigen in a test sample suspected of containing the antibody, said method comprising:

(a) contacting the test sample with a [polynucleotide] polypeptide for a time and under conditions sufficient to allow antigen/antibody complexes to form;

wherein the [polynucleotide] polypeptide contains at least one epitope derived from a sequence selected from the group consisting of: SEQ ID NO[S]:24[-28 and degenerate codon equivalents thereof] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28; and

(b) detecting the presence of said complexes as an indication of the antibody specific for the BS322 antigen.

68. (Amended). The method of claim 67, wherein the [polynucleotide] polypeptide is attached to a solid phase.

70. (Amended). A method for producing antibodies which specifically bind to BS322 antigen, said method comprising:

administering to an individual an isolated immunogenic polypeptide in an amount sufficient to elicit an immune response,

wherein said immunogenic polypeptide comprises at least one amino acid sequence [BS322 epitope and is] selected from the group consisting of: SEQ ID NO[S]:24[-28 and degenerate codon equivalents thereof] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

72. (Amended). An isolated [DNA molecule] polypeptide[,] selected from the group consisting of: SEQ ID NO[S]:24[-28 and degenerate codon equivalents thereof] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27 and SEQ ID NO: 28.

73. (Amended). The polypeptide [DNA molecule] of claim 72, wherein said molecule is produced by recombinant techniques.

74. (Amended). The polypeptide [DNA molecule] of claim 72, wherein said molecule is produced by synthetic techniques.

75. (Amended). A test kit for determining if BS322 antigen or anti-BS322 antibody is present in a test sample, said kit comprising:

a container containing at least one isolated [DNA molecule] polypeptide selected from the group consisting of SEQ ID NO[S]:24[-28 and degenerate codon equivalents thereof] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

76. (Amended). The test kit of claim 75, wherein the polypeptide [DNA molecule] is attached to a solid phase.

80. (Amended). A method for producing antibodies which specifically bind to BS322 antigen, comprising:

administering to an individual an isolated immunogenic polypeptide in an amount sufficient to elicit an immune response,

wherein said immunogenic polypeptide is [a DNA molecule] selected from the group consisting of: SEQ ID NO[S]:24[-28 and degenerate codon equivalents thereof] SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, and SEQ ID NO: 28.

#28/dec.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Billing-Medel, *et al.*

Serial No.: 09/489,079

Filed: January 21, 2000

For: Reagents and Methods Useful For Detecting Diseases of the Breast

Attorney Docket No.: 6451.US.P1

Examiner: J. Epps

Group Art Unit: 1635

Certificate of Mailing (37 CFR 1.8(a)):

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being sent by first class mail to the Commissioner for Patents, Washington D.C., 20231 on January 27, 2003.

Wanda C. Smith

Wanda E. Smith

DECLARATION UNDER 37 C.F.R. SECTION 1.132
of EDWARD GRANADOS

Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Edward Granados, declare:

1. I am one skilled in the art of cancer diagnostics. I have a Ph.D. in chemistry from the State University of New York at Buffalo, and an M.A. and B.A., also in Chemistry, from the State University of New York at Oneonta.

2. I have worked at Abbott Laboratories in the Diagnostics Division for eighteen years. My responsibilities include: the development of new diagnostic technologies and the discovery and validation of novel cancer markers to improve the accuracy of diagnosing the onset of cancer.

3. I have also authored numerous patents and publications relating to cancer markers. (See Exhibit A).

4. I prepared an alignment between BS322 and NY-BR-1 (AF269087). The alignment was prepared using the software program Sequencher (Version 4) which is commercially available from Gene Codes Corporation, 640 Avis Drive, Ann Arbor, MI 48108. The primers used (and which are described in *Cancer Research,* 61:2055-2061 (March 1, 2001) were:
primer BR-1A TCTCATAGATGCTGGTGCTGATC
primer BR1.1B CCCAGACATTGAATTTTGGCAGAC

5. BS322 contains 2683 nucleotides (see the consensus sequence shown in SEQ ID NO:9 of the above-identified application) and NY-BR-1 contains 4466 nucleotides. Based upon the alignment that I prepared as described above in Paragraph 4, I prepared the contig map shown in attached Exhibit B. The contig shows that BS322 is missing a single stretch of 185 nucleotides that are present in NY-BR-1. These nucleotides are missing between position 1198 and 1199 of BS322. The missing piece is nucleotides 3015 thru 3198 of NY-BR-1 (AF269087). Also, the first 45 bases of BS322 are 44.4 percent identical to AF269087). The remaining bases were 99.2% identical (see attached Exhibit C).

6. I prepared an amino acid sequence alignment between SEQ ID NOS: 24 and 25 of the above-identified application and NY-BR-1 (see attached Exhibit D). The alignment was prepared using the Pileup and Pretty alignment programs that are part of the Wisconsin Package. The Wisconsin Package is a compilation of genomic and proteomic programs that is a product of Accelrys, San Diego, California.

7. In the alignment shown in Exhibit D, capital letters represent matches and small letters represent mismatches in

the alignment. For SEQ ID NO:24, the matches begin at amino acid 592 of NY-BR-1. There are 5 mismatches until amino acid 972 and at the end, only 1 out of the remaining 16 amino acids contain a mismatch. For SEQ ID NO:25, beginning at amino acid 1025 of NY-BR-1, there are 9 mismatches initially, and then the remainder of the sequence is a complete match.

8. I hereby declare that all statements made herein are of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Edward Granados
Edward Granados

01/10/03
Date

EXHIBIT A

PATENTS

US6465181 10/15/2002 Reagents and methods useful for detecting diseases of the prostate
US6391543 05/21/2002 Reagents and methods useful for detecting diseases of the prostate
US6350583 02/26/2002 Reagents and methods useful for detecting diseases of the prostate
US6252047 06/26/2001 Reagents and methods useful for detecting diseases of the prostate
US6232456 05/15/2001 Serine protease reagents and methods useful for detecting and treating diseases of the prostate
US6203992 03/20/2001 Nucleic acid primers and probes for detecting tumor cells
US6183952 02/06/2001 Reagents and methods useful for detecting diseases of the breast
US6130043 10/10/2000 Reagents and methods useful for detecting diseases of the prostate
US5955268 09/21/1999 Method and reagent for detecting multiple nucleeic acid sequences in a test sampl
US5637472 06/10/1997 Hydrazine derivitized cells
US5591598 01/07/1997 Method for quantitating hydrazine groups
US5229268 07/20/1993 Method for diagnostic immunoassay by solid phase separation

PUBLICATIONS

Colpitts TL, Billing-Medel P, Granados EN, Hayden M, Hodges S, Menhart N, Roberts L, Russel J., Stroupe SD. Mammaglobin is found in breast tissue as a complex with BU101.

Colpitts TL, Billing-Medel P, Friedman P, Granados EN, Hodges S, Menhart N, Roberts L, Russel J., Stroupe SD. Mammaglobin complexes with BU101 in breast tissue. AnnNY Acad Sci. 2000; 923: 312-5. Biochemistry, 2001 Sep 18;40(37):11048-59>

Methylated poly(L-lysine): Conformational effects and interactions with polynucleotides. Bello.J; Granado EN; Lewinski S; Bello HR; Trueheart T. J Biomol Struct Dyn 2(5) p899-913,1985.

Preparation and assay of poly ICL-CM dextran,an interferon inducer of reduced toxicity. Bello J; Granados EN; McGarry M; O'Malley J.Methods Enzymol 119 p103-106,1986.

Purification of carboxymethylcellulose decreases toxicity of poly ICLC in mice.Bello J; O'Malley J; Granados EN. J.Interferon Res 5(3) p429-30,1985.

Poly ICL-CM dextran: An interferon inducer of reduced toxicity.Granados EN; Dawidzik J; O'Malley; McGarry M; Bello J. J Interferon Res 4(2) p155-160, 1984.

Poly ICLC induces anti-IC antibodies in mice and rabbits.Granados EN; Alm; O'Malley: McGarry M; Bello J. J Interferon Res 4(1) p57-62,1984.

Human serum digests poly(rI) . poly(rC) differently from other mammalian sera. Granados EN; Lewinski S; O'Malley J; Bello J.J Interferon Res 4(1) p51-55,1984.

Conformation and aggregation of melittin: Dependence on pH and concentration. Bello J; Bello HR; Granados EN.Biochemistry 21(3) p461-5,1982.

Interactions of poly(trimethylysine) and poly(lysine) with polynucleotides:Circular dichroism and A-T sequence selectivity.Granados,EN;Bello J. Biochemistry 20(16) p4761-4765,1981.

Interactions of poly(trimethyllysine) and poly(ornithine) with polynucleotides:Salt dissociation and thermal denaturization.Granados EN;Bello J.Biochemistry 19(14)p3227-3233,1980.

Alkylated poly-amino part I: Conformational properties of poly-n-epsilon trimethyl-L-lysine and poly-n-delta tri methyl-L-ornithine.Granados EN; Bello.J. Biopolymers 18 (6)p1479-1486,1979.

Enhanced Sensitivity Assay for the TDx Analyzer. Grenier F; Schick B: Granados E; Kolaczkowski L; Pry T. Clin Chem 33 (9) p1570,1987.

TDx-R Digoxin III A non-extraction immunoassay for serum digoxin. Grenier,F Schick B; Granados E; Wang N; Hansen J; Pry T. Clin Chem 33 (6) p923, 1987.

EXHIBIT B

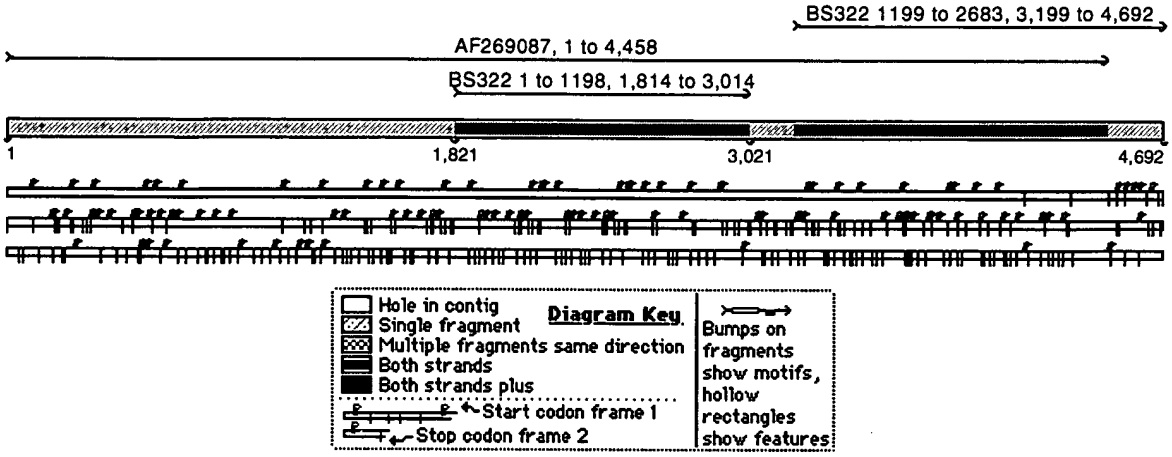

EXHIBIT C

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>AF269087          #31             GTCCACTCTG GGGATCTTAG AAAGATCCAT
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>AF269087          #61             AAAGCTGCCT CCCGGGGACA AGTCCGGAAG
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>AF269087	#1621	AATTCTTGGG ATTCTGAGAG TCTCTGTGAG
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>AF269087          #1711          ATAAATGGAA AATTAGAAGA GTCTCCTAAT
                                  ..............................
                   #1711          ATAAATGGAA AATTAGAAGA GTCTCCTAAT


>AF269087          #1741          AAAGATGGTC TTCTGAAGGC TACCTGCGGA
                                  ..............................
                   #1741          AAAGATGGTC TTCTGAAGGC TACCTGCGGA


>AF269087          #1771          ATGAAAGTTT CTATTCCAAC TAAAGCCTTA
                                  ..............................
                   #1771          ATGAAAGTTT CTATTCCAAC TAAAGCCTTA


>AF269087          #1801          GAATTGAAGG ACATGCAAAC TTTCAAAGCG
>BS322 1 to 1198   >#1>                       AGTATAC ATTCTTTATT
                                  ..............................
                   #1801          GAATTGAAGG ACAWGYAWAC WTTCWWWRYK
                                                 * * *   *   ******


>AF269087          #1831          GAGCCTCCGG GGAAGCCATC TGCCTTCGAG
>BS322 1 to 1198   #18            AATCAT::TT TGCTTCCAAC :CCCATTTAG
                                  ..............................
                   #1831          RAKCMTCCKK KGMWKCCAWC TSCCWTYKAG
                                  * * * **** * ***   *  **  * **


>AF269087          #1861          CCTGCCACTG AAATGCAAAA GTCTGTCCCA
>BS322 1 to 1198   #48            CCTGCCATTG AAATGCAAAA GTCTGTTCCA
                                  ..............................
                   #1861          CCTGCCAYTG AAATGCAAAA GTCTGTYCCA
                                         *                     *


>AF269087          #1891          AATAAAGCCT TGGAATTGAA AAATGAACAA
>BS322 1 to 1198   #78            AATAAAGCCT TGGAATTGAA GAATGAACAA
                                  ..............................
                   #1891          AATAAAGCCT TGGAATTGAA RAATGAACAA
                                                        *
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>AF269087          #1921          ACATGGAGAG CAGATGAGAT ACTCCCATCA
>BS322 1 to 1198   #108           ACATTGAGAG CAGATGAGAT ACTCCCATCA
                                  ..............................
                   #1921          ACATKGAGAG CAGATGAGAT ACTCCCATCA
                                      *

>AF269087          #1951          GAATCCAAAC AAAAGGACTA TGAAGAAAAT
>BS322 1 to 1198   #138           GAATCCAAAC AAAAGGACTA TGAAGAAAGT
                                  ..............................
                   #1951          GAATCCAAAC AAAAGGACTA TGAAGAAART
                                                                *

>AF269087          #1981          TCTTGGGATA CTGAGAGTCT CTGTGAGACT
>BS322 1 to 1198   #168           TCTTGGGATT CTGAGAGTCT CTGTGAGACT
                                  ..............................
                   #1981          TCTTGGGATW CTGAGAGTCT CTGTGAGACT
                                           *

>AF269087          #2011          GTTTCACAGA AGGATGTGTG TTTACCCAAG
>BS322 1 to 1198   #198           GTTTCACAGA AGGATGTGTG TTTACCCAAG
                                  ..............................
                   #2011          GTTTCACAGA AGGATGTGTG TTTACCCAAG

>AF269087          #2041          GCTGCGCATC AAAAAGAAAT AGATAAAATA
>BS322 1 to 1198   #228           GCTGCGCATC AAAAAGAAAT AGATAAAATA
                                  ..............................
                   #2041          GCTGCGCATC AAAAAGAAAT AGATAAAATA

>AF269087          #2071          AATGGAAAAT TAGAAGGGTC TCCTGTTAAA
>BS322 1 to 1198   #258           AATGGAAAAT TAGAAGGGTC TCCTGTTAAA
                                  ..............................
                   #2071          AATGGAAAAT TAGAAGGGTC TCCTGTTAAA

>AF269087          #2101          GATGGTCTTC TGAAGGCTAA CTGCGGAATG
>BS322 1 to 1198   #288           GATGGTCTTC TGAAGGCTAA CTGCGGAATG
                                  ..............................
                   #2101          GATGGTCTTC TGAAGGCTAA CTGCGGAATG
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>AF269087          #2131          AAAGTTTCTA TTCCAACTAA AGCCTTAGAA
>BS322 1 to 1198   #318           AAAGTTTCTA TTCCAACTAA AGCCTTAGAA
                                  ...°.........................
                   #2131          AAAGTTTCTA TTCCAACTAA AGCCTTAGAA

>AF269087          #2161          TTGATGGACA TGCAAACTTT CAAAGCAGAG
>BS322 1 to 1198   #348           TTGATGGACA TGCAAACTTT CAAAGCAGAG
                                  ..............................
                   #2161          TTGATGGACA TGCAAACTTT CAAAGCAGAG

>AF269087          #2191          CCTCCCGAGA AGCCATCTGC CTTCGAGCCT
>BS322 1 to 1198   #378           CCTCCCGAGA AGCCATCTGC CTTCGAGCCT
                                  ..............................
                   #2191          CCTCCCGAGA AGCCATCTGC CTTCGAGCCT

>AF269087          #2221          GCCATTGAAA TGCAAAAGTC TGTTCCAAAT
>BS322 1 to 1198   #408           GCCATTGAAA TGCAAAAGTC TGTTCCAAAT
                                  ..............................
                   #2221          GCCATTGAAA TGCAAAAGTC TGTTCCAAAT

>AF269087          #2251          AAAGCCTTGG AATTGAAGAA TGAACAAACA
>BS322 1 to 1198   #438           AAAGCCTTGG AATTGAAGAA TGAACAAACA
                                  ..............................
                   #2251          AAAGCCTTGG AATTGAAGAA TGAACAAACA

>AF269087          #2281          TTGAGAGCAG ATGAGATACT CCCATCAGAA
>BS322 1 to 1198   #468           TTGAGAGCAG ATGAGATACT CCCATCAGAA
                                  ..............................
                   #2281          TTGAGAGCAG ATGAGATACT CCCATCAGAA

>AF269087          #2311          TCCAAACAAA AGGACTATGA AGAAAGTTCT
>BS322 1 to 1198   #498           TCCAAACAAA AGGACTATGA AGAAAGTTCT
                                  ..............................
                   #2311          TCCAAACAAA AGGACTATGA AGAAAGTTCT
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>AF269087          #2341          TGGGATTCTG AGAGTCTCTG TGAGACTGTT
>BS322 1 to 1198   #528           TGGGATTCTG AGAGTCTCTG TGAGACTGTT
                                  ..............................
                   #2341          TGGGATTCTG AGAGTCTCTG TGAGACTGTT


>AF269087          #2371          TCACAGAAGG ATGTGTGTTT ACCCAAGGCT
>BS322 1 to 1198   #558           TCACAGAAGG ATGTGTGTTT ACCCAAGGCT
                                  ..............................
                   #2371          TCACAGAAGG ATGTGTGTTT ACCCAAGGCT


>AF269087          #2401          ACACATCAAA AAGAAATAGA TAAAATAAAT
>BS322 1 to 1198   #588           ACACATCAAA AAGAAATAGA TAAAATAAAT
                                  ..............................
                   #2401          ACACATCAAA AAGAAATAGA TAAAATAAAT


>AF269087          #2431          GGAAAATTAG AAGAGTCTCC TGATAATGAT
>BS322 1 to 1198   #618           GGAAAATTAG AAGAGTCTCC TGATAATGAT
                                  ..............................
                   #2431          GGAAAATTAG AAGAGTCTCC TGATAATGAT


>AF269087          #2461          GGTTTTCTGA AGGCTCCCTG CAGAATGAAA
>BS322 1 to 1198   #648           GGTTTTCTGA AGGCTCCCTG CAGAATGAAA
                                  ..............................
                   #2461          GGTTTTCTGA AGGCTCCCTG CAGAATGAAA


>AF269087          #2491          GTTTCTATTC CAACTAAAGC CTTAGAATTG
>BS322 1 to 1198   #678           GTTTCTATTC CAACTAAAGC CTTAGAATTG
                                  ..............................
                   #2491          GTTTCTATTC CAACTAAAGC CTTAGAATTG


>AF269087          #2521          ATGGACATGC AAACTTTCAA AGCAGAGCCT
>BS322 1 to 1198   #708           ATGGACATGC AAACTTTCAA AGCAGAGCCT
                                  ..............................
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                    #2521           ATGGACATGC AAACTTTCAA AGCAGAGCCT

>AF269087           #2551           CCCGAGAAGC CATCTGCCTT CGAGCCTGCC
>BS322 1 to 1198    #738            CCCGAGAAGC CATCTGCCTT CGAGCCTGCC
                                    ..............................
                    #2551           CCCGAGAAGC CATCTGCCTT CGAGCCTGCC

>AF269087           #2581           ATTGAAATGC AAAAGTCTGT TCCAAATAAA
>BS322 1 to 1198    #768            ATTGAAATGC AAAAGTCTGT TCCAAATAAA
                                    ..............................
                    #2581           ATTGAAATGC AAAAGTCTGT TCCAAATAAA

>AF269087           #2611           GCCTTGGAAT TGAAGAATGA ACAAACATTG
>BS322 1 to 1198    #798            GCCTTGGAAT TGAAGAATGA ACAAACATTG
                                    ..............................
                    #2611           GCCTTGGAAT TGAAGAATGA ACAAACATTG

>AF269087           #2641           AGAGCAGATC AGATGTTCCC TTCAGAATCA
>BS322 1 to 1198    #828            AGAGCAGATC AGATGTTCCC TTCAGAATCA
                                    ..............................
                    #2641           AGAGCAGATC AGATGTTCCC TTCAGAATCA

>AF269087           #2671           AAACAAAAGA AGGTTGAAGA AAATTCTTGG
>BS322 1 to 1198    #858            AAACAAAAGA ACGTTGAAGA AAATTCTTGG
                                    ..............................
                    #2671           AAACAAAAGA ASGTTGAAGA AAATTCTTGG
                                                *

>AF269087           #2701           GATTCTGAGA GTCTCCGTGA GACTGTTTCA
>BS322 1 to 1198    #888            GATTCTGAGA GTCTCCGTGA GACTGTTTCA
                                    ..............................
                    #2701           GATTCTGAGA GTCTCCGTGA GACTGTTTCA

>AF269087           #2731           CAGAAGGATG TGTGTGTACC CAAGGCTACA
>BS322 1 to 1198    #918            CAGAAGGATG TGTGTGTACC CAAGGCTACA
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                                  ..............................
                    #2731         CAGAAGGATG TGTGTGTACC CAAGGCTACA


>AF269087           #2761         CATCAAAAAG AAATGGATAA AATAAGTGGA
>BS322 1 to 1198    #948          CATCAAAAAG AAATGGATAA AATAAGTGGA
                                  ..............................
                    #2761         CATCAAAAAG AAATGGATAA AATAAGTGGA


>AF269087           #2791         AAATTAGAAG ATTCAACTAG CCTATCAAAA
>BS322 1 to 1198    #978          AAATTAGAAG ATTCAACTAG CCTATCAAAA
                                  ..............................
                    #2791         AAATTAGAAG ATTCAACTAG CCTATCAAAA


>AF269087           #2821         ATCTTGGATA CAGTTCATTC TTGTGAAAGA
>BS322 1 to 1198    #1008         ATCTTGGATA CAATTCATTC TTGTGAAAGA
                                  ..............................
                    #2821         ATCTTGGATA CARTTCATTC TTGTGAAAGA
                                              *

>AF269087           #2851         GCAAGGGAAC TTCAAAAAGA TCACTGTGAA
>BS322 1 to 1198    #1038         GCAAGGGAAC TTCAAAAAGA TCACTGTGAA
                                  ..............................
                    #2851         GCAAGGGAAC TTCAAAAAGA TCACTGTGAA


>AF269087           #2881         CAACGTACAG GAAAAATGGA ACAAATGAAA
>BS322 1 to 1198    #1068         CAATGTACAG GAAAAATGGA ACAAATGAAA
                                  ..............................
                    #2881         CAAYGTACAG GAAAAATGGA ACAAATGAAA
                                     *

>AF269087           #2911         AAGAAGTTTT GTGTACTGAA AAAGAAACTG
>BS322 1 to 1198    #1098         AAGAAGTTTT GTGTACTGAA AAAGAAACTG
                                  ..............................
                    #2911         AAGAAGTTTT GTGTACTGAA AAAGAAACTG


>AF269087           #2941         TCAGAAGCAA AAGAAATAAA ATCACAGTTA
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>BS322 1 to 1198    #1128          TCAGAAGCAA AAGAAATAAA ATCACAGTTA
                                   ..............................
                    #2941          TCAGAAGCAA AAGAAATAAA ATCACAGTTA

>AF269087           #2971          GAGAACCAAA AAGTTAAATG GGAACAAGAG
>BS322 1 to 1198    #1158          GAGAACCAAA AAGTTAAATG GGAACAAGAG
                                   ..............................
                    #2971          GAGAACCAAA AAGTTAAATG GGAACAAGAG

>AF269087           #3001          CTCTGCAGTG TGAGATTGAC TTTAAACCAA
>BS322 1 to 1198    #1188          CTCTGCAGTG TGAG
                                   ..............................
                    #3001          CTCTGCAGTG TGAGATTGAC TTTAAACCAA

>AF269087           #3031          GAAGAAGAGA AGAGAAGAAA TGCCGATATA
                                   ..............................
                    #3031          GAAGAAGAGA AGAGAAGAAA TGCCGATATA

>AF269087           #3061          TTAAATGAAA AAATTAGGGA AGAATTAGGA
                                   ..............................
                    #3061          TTAAATGAAA AAATTAGGGA AGAATTAGGA

>AF269087           #3091          AGAATCGAAG AGCAGCATAG GAAAGAGTTA
                                   ..............................
                    #3091          AGAATCGAAG AGCAGCATAG GAAAGAGTTA

>AF269087           #3121          GAAGTGAAAC AACAACTTGA ACAGGCTCTC
                                   ..............................
                    #3121          GAAGTGAAAC AACAACTTGA ACAGGCTCTC

>AF269087           #3151          AGAATACAAG ATATAGAATT GAAGAGTGTA
                                   ..............................
                    #3151          AGAATACAAG ATATAGAATT GAAGAGTGTA
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>BS322 1199 to 2683 >#1>                                  GT TTCTCACACT
>AF269087           #3181                GAAAGTAATT TGAATCAGGT TTCTCACACT
                                         ..............................
                    #3181                GAAAGTAATT TGAATCAGGT TTCTCACACT


>BS322 1199 to 2683 #13                  CATGAAAATG AAAATTATCT CTTACATGAA
>AF269087           #3211                CATGAAAATG AAAATTATCT CTTACATGAA
                                         ..............................
                    #3211                CATGAAAATG AAAATTATCT CTTACATGAA


>BS322 1199 to 2683 #43                  AATTGCATGT TGAAAAAGGA AATTGCCATG
>AF269087           #3241                AATTGCATGT TGAAAAAGGA AATTGCCATG
                                         ..............................
                    #3241                AATTGCATGT TGAAAAAGGA AATTGCCATG


>BS322 1199 to 2683 #73                  CTAAAACTGG AAATAGCCAC ACTGAAACAC
>AF269087           #3271                CTAAAACTGG AAATAGCCAC ACTGAAACAC
                                         ..............................
                    #3271                CTAAAACTGG AAATAGCCAC ACTGAAACAC


>BS322 1199 to 2683 #103                 CAATACCAGG AAAAGGAAAA TAAATACTTT
>AF269087           #3301                CAATACCAGG AAAAGGAAAA TAAATACTTT
                                         ..............................
                    #3301                CAATACCAGG AAAAGGAAAA TAAATACTTT


>BS322 1199 to 2683 #133                 GAGGACATTA AGATTTTAAA AGAAAAGAAT
>AF269087           #3331                GAGGACATTA AGATTTTAAA AGAAAAGAAT
                                         ..............................
                    #3331                GAGGACATTA AGATTTTAAA AGAAAAGAAT


>BS322 1199 to 2683 #163                 GCTGAACTTC AGATGACCCT AAAACTGAAA
>AF269087           #3361                GCTGAACTTC AGATGACCCT AAAACTGAAA
                                         ..............................
                    #3361                GCTGAACTTC AGATGACCCT AAAACTGAAA
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>BS322 1199 to 2683 #193          GAGGAATCAT TAACTAAAAG GGCATCTCAA
>AF269087           #3391         GAGGAATCAT TAACTAAAAG GGCATCTCAA
                                  ..............................
                    #3391         GAGGAATCAT TAACTAAAAG GGCATCTCAA


>BS322 1199 to 2683 #223          TATAGTGGGC AGCTTAAAGT TCTGATAGCT
>AF269087           #3421         TATAGTGGGC AGCTTAAAGT TCTGATAGCT
                                  ..............................
                    #3421         TATAGTGGGC AGCTTAAAGT TCTGATAGCT


>BS322 1199 to 2683 #253          GAGAACACAA TGCTCACTTC TAAATTGAAG
>AF269087           #3451         GAGAACACAA TGCTCACTTC TAAATTGAAG
                                  ..............................
                    #3451         GAGAACACAA TGCTCACTTC TAAATTGAAG


>BS322 1199 to 2683 #283          GAAAAACAAG ACAAAGAAAT ACTAGAGGCA
>AF269087           #3481         GAAAAACAAG ACAAAGAAAT ACTAGAGGCA
                                  ..............................
                    #3481         GAAAAACAAG ACAAAGAAAT ACTAGAGGCA


>BS322 1199 to 2683 #313          GAAATTGAAT CACACCATCC TAGACTGGCT
>AF269087           #3511         GAAATTGAAT CACACCATCC TAGACTGGCT
                                  ..............................
                    #3511         GAAATTGAAT CACACCATCC TAGACTGGCT


>BS322 1199 to 2683 #343          TCTGCTGTAC AAGACCATGA TCAAATTGTG
>AF269087           #3541         TCTGCTGTAC AAGACCATGA TCAAATTGTG
                                  ..............................
                    #3541         TCTGCTGTAC AAGACCATGA TCAAATTGTG


>BS322 1199 to 2683 #373          ACATCAAGAA AAAGTCAAGA ACCTGCTTTC
>AF269087           #3571         ACATCAAGAA AAAGTCAAGA ACCTGCTTTC
                                  ..............................
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                    #3571               ACATCAAGAA AAAGTCAAGA ACCTGCTTTC


>BS322 1199 to 2683 #403                CACATTGCAG GAGATGCTTG TTTGCAAAGA
>AF269087           #3601               CACATTGCAG GAGATGCTTG TTTGCAAAGA
                                        ..............................
                    #3601               CACATTGCAG GAGATGCTTG TTTGCAAAGA


>BS322 1199 to 2683 #433                AAAATGAATG TTGATGTGAG TAGTACGATA
>AF269087           #3631               AAAATGAATG TTGATGTGAG TAGTACGATA
                                        ..............................
                    #3631               AAAATGAATG TTGATGTGAG TAGTACGATA


>BS322 1199 to 2683 #463                TATAACAATG AGGTGCTCCA TCAACCACTT
>AF269087           #3661               TATAACAATG AGGTGCTCCA TCAACCACTT
                                        ..............................
                    #3661               TATAACAATG AGGTGCTCCA TCAACCACTT


>BS322 1199 to 2683 #493                TCTGAAGCTC AAAGGAAATC CAAAAGCCTA
>AF269087           #3691               TCTGAAGCTC AAAGGAAATC CAAAAGCCTA
                                        ..............................
                    #3691               TCTGAAGCTC AAAGGAAATC CAAAAGCCTA


>BS322 1199 to 2683 #523                AAAATTAATC TCAATTATGC AGGAGATGCT
>AF269087           #3721               AAAATTAATC TCAATTATGC AGGAGATGCT
                                        ..............................
                    #3721               AAAATTAATC TCAATTATGC AGGAGATGCT


>BS322 1199 to 2683 #553                CTAAGAGAAA ATACATTGGT TTCAGAACAT
>AF269087           #3751               CTAAGAGAAA ATACATTGGT TTCAGAACAT
                                        ..............................
                    #3751               CTAAGAGAAA ATACATTGGT TTCAGAACAT


>BS322 1199 to 2683 #583                GCACAAAGAG ACCAACGTGA AACACAGTGT
>AF269087           #3781               GCACAAAGAG ACCAACGTGA AACACAGTGT
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                                    ..............................
                    #3781           GCACAAAGAG ACCAACGTGA AACACAGTGT


>BS322 1199 to 2683 #613            CAAATGAAGG AAGCTGAACA CATGTATCAA
>AF269087           #3811           CAAATGAAGG AAGCTGAACA CATGTATCAA
                                    ..............................
                    #3811           CAAATGAAGG AAGCTGAACA CATGTATCAA


>BS322 1199 to 2683 #643            AACGAACAAG ATAATGTGAA CAAACACACT
>AF269087           #3841           AACGAACAAG ATAATGTGAA CAAACACACT
                                    ..............................
                    #3841           AACGAACAAG ATAATGTGAA CAAACACACT


>BS322 1199 to 2683 #673            GAACAGCAGG AGTCTCTAGA TCAGAAATTA
>AF269087           #3871           GAACAGCAGG AGTCTCTAGA TCAGAAATTA
                                    ..............................
                    #3871           GAACAGCAGG AGTCTCTAGA TCAGAAATTA


>BS322 1199 to 2683 #703            TTTCAACTAC AAAGCAAAAA TATGTGGCTT
>AF269087           #3901           TTTCAACTAC AAAGCAAAAA TATGTGGCTT
                                    ..............................
                    #3901           TTTCAACTAC AAAGCAAAAA TATGTGGCTT


>BS322 1199 to 2683 #733            CAACAGCAAT TAGTTCATGC ACATAAGAAA
>AF269087           #3931           CAACAGCAAT TAGTTCATGC ACATAAGAAA
                                    ..............................
                    #3931           CAACAGCAAT TAGTTCATGC ACATAAGAAA


>BS322 1199 to 2683 #763            GCTGACAACA AAAGCAAGAT AACAATTGAT
>AF269087           #3961           GCTGACAACA AAAGCAAGAT AACAATTGAT
                                    ..............................
                    #3961           GCTGACAACA AAAGCAAGAT AACAATTGAT


>BS322 1199 to 2683 #793            ATTCATTTTC TTGAGAGGAA AATGCAACAT
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>AF269087          #3991          ATTCATTTTC TTGAGAGGAA AATGCAACAT
                                  ..............................
                   #3991          ATTCATTTTC TTGAGAGGAA AATGCAACAT

>BS322 1199 to 2683 #823          CATCTCCTAA AAGAGAAAAA TGAGGAGATA
>AF269087          #4021          CATCTCCTAA AAGAGAAAAA TGAGGAGATA
                                  ..............................
                   #4021          CATCTCCTAA AAGAGAAAAA TGAGGAGATA

>BS322 1199 to 2683 #853          TTTAATTACA ATAACCATTT AAAAAACCGT
>AF269087          #4051          TTTAATTACA ATAACCATTT AAAAAACCGT
                                  ..............................
                   #4051          TTTAATTACA ATAACCATTT AAAAAACCGT

>BS322 1199 to 2683 #883          ATATATCAAT ATGAAAAAGA GAAAGCAGAA
>AF269087          #4081          ATATATCAAT ATGAAAAAGA GAAAGCAGAA
                                  ..............................
                   #4081          ATATATCAAT ATGAAAAAGA GAAAGCAGAA

>BS322 1199 to 2683 #913          ACAGAAAACT CATGAGAGAC AAGCAGTAAG
>AF269087          #4111          ACAGAAAACT CATGAGAGAC AAGCAGTAAG
                                  ..............................
                   #4111          ACAGAAAACT CATGAGAGAC AAGCAGTAAG

>BS322 1199 to 2683 #943          AAACTTCTTT TGGAGAAACA ACAGACCAGA
>AF269087          #4141          AAACTTCTTT TGGAGAAACA ACAGACCAGA
                                  ..............................
                   #4141          AAACTTCTTT TGGAGAAACA ACAGACCAGA

>BS322 1199 to 2683 #973          TCTTTACTCA CAACTCATGC TAGGAGGCCA
>AF269087          #4171          TCTTTACTCA CAACTCATGC TAGGAGGCCA
                                  ..............................
                   #4171          TCTTTACTCA CAACTCATGC TAGGAGGCCA
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>BS322 1199 to 2683 #1003          GTCCTAGCAT CACCTTATGT TGAAAATCTT
>AF269087          #4201          GTCCTAGCAT CACCTTATGT TGAAAATCTT
                                  ..............................
                   #4201          GTCCTAGCAT CACCTTATGT TGAAAATCTT


>BS322 1199 to 2683 #1033          ACCAATAGTC TGTGTCAACA GAATACTTAT
>AF269087          #4231          ACCAATAGTC TGTGTCAACA GAATACTTAT
                                  ..............................
                   #4231          ACCAATAGTC TGTGTCAACA GAATACTTAT


>BS322 1199 to 2683 #1063          TTTAGAAGAA AAATTCATGA TTTCTTCCTG
>AF269087          #4261          TTTAGAAGAA AAATTCATGA TTTCTTCCTG
                                  ..............................
                   #4261          TTTAGAAGAA AAATTCATGA TTTCTTCCTG


>BS322 1199 to 2683 #1093          AAGCCTACAG ACATAAAATA ACAGTGTGAA
>AF269087          #4291          AAGCCTACAG ACATAAAATA ACAGTGTGAA
                                  ..............................
                   #4291          AAGCCTACAG ACATAAAATA ACAGTGTGAA


>BS322 1199 to 2683 #1123          GAATTACTTG TTCACGAA:T :C:TCGCTCT
>AF269087          #4321          GAATTACTTG TTCACGAATT GCATAAAGCT
                                  ..............................
                   #4321          GAATTACTTG TTCACGAATT GCATMRMKCT
                                                    *  * * ****


>BS322 1199 to 2683 #1153          GCACTCCA:G CCTAGGCGCC TAGTGAAACC
>AF269087          #4351          GCACAGGATT CCCATCTACC CTGATGATGC
                                  ..............................
                   #4351          GCACWSSATK CCYAKSYRCC YWGWKRAWSC
                                      *** **   * ****   ** *** **


>BS322 1199 to 2683 #1183          CTGTGTCA:A AAAGAAAA:A AACAAAAACA
>AF269087          #4381          AGCAGACATC ATTCAATCCA ACCAGAATCT
                                  ..............................
                   #4381          MKSWGWCATM AWWSAAWMCA AMCARAAWCW
                                  **** *  **  ***  ***   *  *  * *
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>BS322 1199 to 2683 #1213          AACT:TCCAA GAC:CTCGA: GTGGTTTTTG
>AF269087          #4411          CGCTCTGCAC TCCAGCCTAG GTGACAGAGT
                                  ..............................
                   #4411          MRCTCTSCAM KMCASYCKAG GTGRYWKWKK
                                  **  * *  * ** *** * *    *******

>BS322 1199 to 2683 #1243          GAGACCCTGT ATCACTTCAA ATAATGTGTT
>AF269087          #4441          GAGACTCCAC CTCGGAAA
                                  ..............................
                   #4441          GAGACYCYRY MTCRSWWMAA ATAATGTGTT
                                       * *** *  *****

>BS322 1199 to 2683 #1273          AAACAAGCAT CTTCATCTCA TTAAATAGAA
                                  ..............................
                   #4471          AAACAAGCAT CTTCATCTCA TTAAATAGAA

>BS322 1199 to 2683 #1303          ATGTTGAAAA ATTGCTTTTG GAATAATTGA
                                  ..............................
                   #4501          ATGTTGAAAA ATTGCTTTTG GAATAATTGA

>BS322 1199 to 2683 #1333          CTTATGGATA TTTCATCAAA TTTACAGTTG
                                  ..............................
                   #4531          CTTATGGATA TTTCATCAAA TTTACAGTTG

>BS322 1199 to 2683 #1363          GCTATGCTTT CTTATTGTGC ATACTATGAA
                                  ..............................
                   #4561          GCTATGCTTT CTTATTGTGC ATACTATGAA

>BS322 1199 to 2683 #1393          ATGTTTTTCT TCAAAAAGTG TTTATAAGTG
                                  ..............................
                   #4591          ATGTTTTTCT TCAAAAAGTG TTTATAAGTG

>BS322 1199 to 2683 #1423          GTAAGTTTAA GAATGGGGTT GACAGCATTA
                                  ..............................
                   #4621          GTAAGTTTAA GAATGGGGTT GACAGCATTA
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>BS322 1199 to 2683 #1453          TCTTTTGTGG TTATTTGATT AAACATTTAC
                                   ..............................
                   #4651           TCTTTTGTGG TTATTTGATT AAACATTTAC


>BS322 1199 to 2683 #1483          TAATTGTGCA TA
                                   ............
                   #4681           TAATTGTGCA TA
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EXHIBIT D

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NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                 51                                                 100
   NYBR1list2.msf{NY-BR-1}  rtplmkalqc hqeacanili dsgadinlvd vygnmalhya vyseilsvva
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                101                                                 150
   NYBR1list2.msf{NY-BR-1}  kllshgavie vhnkasltpl llsitkrseq ivefllikna nanavnkykc
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                151                                                 200
   NYBR1list2.msf{NY-BR-1}  talmlavchg sseivgmllq qnvdvfaadi cgvtaehyav tcgfhhiheq
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                201                                                 250
   NYBR1list2.msf{NY-BR-1}  imeyirklsk nhqntnpegt sagtpdeaap laertpdtae slvektpdea
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                251                                                 300
   NYBR1list2.msf{NY-BR-1}  aplvertpdt aeslvektpd eaaslvegts dkiqclekat sgkfeqsaee
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                301                                                 350
   NYBR1list2.msf{NY-BR-1}  tpreitspak etsekftwpa kgrprkiawe kkedtpreim spaketsekf
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                351                                                 400
   NYBR1list2.msf{NY-BR-1}  twaakgrprk iawekketpv ktgcvarvts nktkvlekgr skmiacptke
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                401                                                 450
   NYBR1list2.msf{NY-BR-1}  sstkasandq rfpseskqee deeyscdsrs lfessakiqv cipesiyqkv
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                451                                                 500
   NYBR1list2.msf{NY-BR-1}  meinreveep pkkpsafkpa iemqnsvpnk afelkneqtl radpmfppes
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                501                                                 550
   NYBR1list2.msf{NY-BR-1}  kqkdyeensw dseslcetvs qkdvclpkat hqkeidking kleespnkdg
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                                551                                                 600
   NYBR1list2.msf{NY-BR-1}  llkatcgmkv siptkalelk dmqtfkaepp gkpsafepat eMQKSVPNKA
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ -MQKSVPNKA

                                601                                                 650
   NYBR1list2.msf{NY-BR-1}  LELKNEQTwR ADEILPSESK QKDYEEnSWD tESLCETVSQ KDVCLPKAAH
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  LELKNEQTlR ADEILPSESK QKDYEEsSWD sESLCETVSQ KDVCLPKAAH

                                651                                                 700
   NYBR1list2.msf{NY-BR-1}  QKEIDKINGK LEGSPVKDGL LKANCGMKVS IPTKALELMD MQTFKAEPPE
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  QKEIDKINGK LEGSPVKDGL LKANCGMKVS IPTKALELMD MQTFKAEPPE

                                701                                                 750
   NYBR1list2.msf{NY-BR-1}  KPSAFEPAIE MQKSVPNKAL ELKNEQTLRA DEILPSESKQ KDYEESSWDS
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
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NYBR1list2.msf{NYBR1sec24}  KPSAFEPAIE MQKSVPNKAL ELKNEQTLRA DEILPSESKQ KDYEESSWDS

                            751                                         800
   NYBR1list2.msf{NY-BR-1}  ESLCETVSQK DVCLPKATHQ KEIDKINGKL EESPDNDGFL KAPCRMKVSI
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  ESLCETVSQK DVCLPKATHQ KEIDKINGKL EESPDNDGFL KAPCRMKVSI

                            801                                         850
   NYBR1list2.msf{NY-BR-1}  PTKALELMDM QTFKAEPPEK PSAFEPAIEM QKSVPNKALE LKNEQTLRAD
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  PTKALELMDM QTFKAEPPEK PSAFEPAIEM QKSVPNKALE LKNEQTLRAD

                            851                                         900
   NYBR1list2.msf{NY-BR-1}  QMFPSESKQK kVEENSWDSE SLRETVSQKD VCVPKATHQK EMDKISGKLE
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  QMFPSESKQK nVEENSWDSE SLRETVSQKD VCVPKATHQK EMDKISGKLE

                            901                                         950
   NYBR1list2.msf{NY-BR-1}  DSTSLSKILD TvHSCERARE LQKDHCEQrT GKMEQMKKKF CVLKKKLSEA
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  DSTSLSKILD TiHSCERARE LQKDHCEQcT GKMEQMKKKF CVLKKKLSEA

                            951                                        1000
   NYBR1list2.msf{NY-BR-1}  KEIKSQLENQ KVKWEQELCS VRltlnqeee krrnadIlne kireelgrie
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
NYBR1list2.msf{NYBR1sec24}  KEIKSQLENQ KVKWEQELCS VRfltlmkmk iisymkIac~ ~~~~~~~~~~

                           1001                                        1050
   NYBR1list2.msf{NY-BR-1}  eqhrkelevk qqleqalriq dielksvesn lnqVSHTHEN ENYLLHENCM
NYBR1list2.msf{NYBR1sec25}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~mgtral qceVSHTHEN ENYLLHENCM
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1051                                        1100
   NYBR1list2.msf{NY-BR-1}  LKKEIAMLKL EIATLKHQYQ EKENKYFEDI KILKEKNAEL QMTLKLKEES
NYBR1list2.msf{NYBR1sec25}  LKKEIAMLKL EIATLKHQYQ EKENKYFEDI KILKEKNAEL QMTLKLKEES
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1101                                        1150
   NYBR1list2.msf{NY-BR-1}  LTKRASQYSG QLKVLIAENT MLTSKLKEKQ DKEILEAEIE SHHPRLASAV
NYBR1list2.msf{NYBR1sec25}  LTKRASQYSG QLKVLIAENT MLTSKLKEKQ DKEILEAEIE SHHPRLASAV
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1151                                        1200
   NYBR1list2.msf{NY-BR-1}  QDHDQIVTSR KSQEPAFHIA GDACLQRKMN VDVSSTIYNN EVLHQPLSEA
NYBR1list2.msf{NYBR1sec25}  QDHDQIVTSR KSQEPAFHIA GDACLQRKMN VDVSSTIYNN EVLHQPLSEA
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1201                                        1250
   NYBR1list2.msf{NY-BR-1}  QRKSKSLKIN LNYAGDALRE NTLVSEHAQR DQRETQCQMK EAEHMYQNEQ
NYBR1list2.msf{NYBR1sec25}  QRKSKSLKIN LNYAGDALRE NTLVSEHAQR DQRETQCQMK EAEHMYQNEQ
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1251                                        1300
   NYBR1list2.msf{NY-BR-1}  DNVNKHTEQQ ESLDQKLFQL QSKNMWLQQQ LVHAHKKADN KSKITIDIHF
NYBR1list2.msf{NYBR1sec25}  DNVNKHTEQQ ESLDQKLFQL QSKNMWLQQQ LVHAHKKADN KSKITIDIHF
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~

                           1301                                   1341
   NYBR1list2.msf{NY-BR-1}  LERKMQHHLL KEKNEEIFNY NNHLKNRIYQ YEKEKAETEN S
NYBR1list2.msf{NYBR1sec25}  LERKMQHHLL KEKNEEIFNY NNHLKNRIYQ YEKEKAETEN S
NYBR1list2.msf{NYBR1sec24}  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~
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